

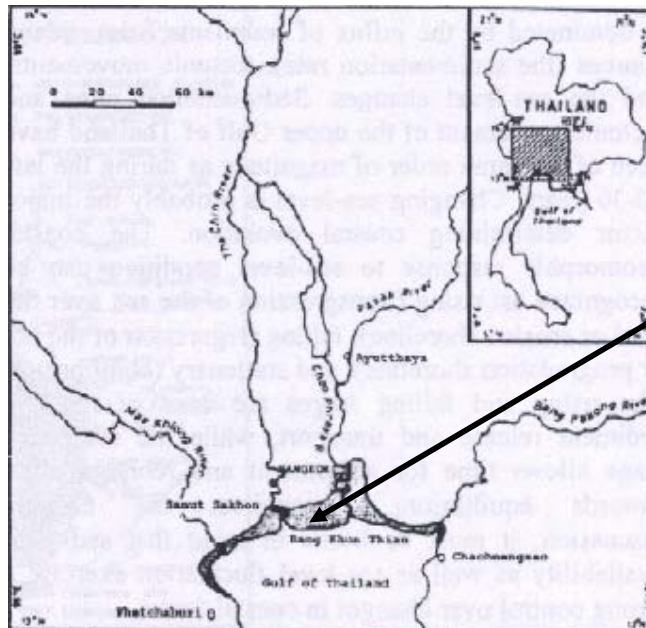
BRIEFING: Khun Samutchine, Samutprakan, Thailand

Excerpts from “A Future Sea-Level Rise: Its impacts on the Coastal Erosion in the Upper Gulf of Thailand”

*by Dr Thanawat Jarupongsakul, Department of Geology,
Chulanlongkorn University*

A global sea-level rise of a half meter over the next century will cause extensive submergence of low-lying coastal areas in the upper Gulf of Thailand region, with accelerate erosion of beaches, steep bluffs, deltas and mangrove swamps. Submergence will increase where land subsidence has followed groundwater extraction, as in the Bangkok areas.

The rate of erosion around the coastal periphery of Thailand is generally from 15 to 25 metres a year. But the country's 2,666.5 kilometer shoreline is under serious threat from coastal erosion, which is occurring at different rates along shorelines of the Gulf of Thailand and the Andaman Sea. The rate of erosion is most alarming along the Gulf of Thailand, from Trat province in the East to Narathiwat province in the South. About 17 percent of the coastline, or about 485 kilometres out of 1653 kilometres in the Gulf of Thailand is severely eroded, while about four percent of the shoreline along the Andaman Sea, or 114 out of 1,014 kilometres, is eroding at what is considered a critical rate.¹



Khun Samutjean

Khun Samutchine – the worst impacted community

The small coastal village of Khun Samutchine, in Samut Prakan province, south of Bangkok is the first community in Thailand, to suffer the direct impacts of coastal erosion caused by

¹ A Future Sea-level rise: Its impacts on the Coastal erosion in the Upper Gulf of Thailand – Thanawat Jarupongsakul, Department of geology, Chulanlongkorn University, Bangkok, 10330, Thailand.

climate change. Samut Prakan province has the highest rate of erosion, officially at about 65 metres a year.

The 200 households in the ancient settlement of Khun Samutchine has a profitable life living off the sea and enjoyed the bounty of a diverse natural habitat with wetlands, mangrove swamps, marshes, sloughs and estuaries that were home to a wide variety of flora and fauna. Unfortunately due to coastal erosion and advancing sea, most of these areas are degraded, deforested and devastated by the saltwater intrusion.

95 families have already been forced to abandon their coastal homes altogether, according to Samorn Kengsamut, village chief of Khun Samutchine "as most people cannot afford to keep building new houses again and again just to see them washed out to sea a few years later."²

The remaining 105 families have discovered that they cannot go any further inland without illegally intruding the land owned by other people.

The most important landmark shrine for the residents of the Khun Samutchine is a Buddhist temple that was once was located in the forest many kilometers away from the beach front, but today it is claimed by the sea. As it is the community heart and soul, villagers made several attempts to contact various agencies to help and had spent their own money to purchase materials to save the area around the temple from further erosion.

Stabilizing and rehabilitating the shoreline is a costly undertaking for villagers at Khun Samutchine. For them, the temple could be protected by constructing breakwaters. Samorn Kengsamut, the village chief pointed out that even the mangrove trees cannot spread their roots because the mud is not deep enough to allow the trees to grow before the wind and wave wash it away.

Dr. Thanawat, has proposed that a severely eroded area like Khun Samutchine needs immediate measures to combine both short and long term solutions to combat the threat from the sea due to global warming. For the short term, he has proposed building of seawall and putting in drainage and pumping systems to manage the land margin in order to stabilize the seashore, and as a long-term solution he has proposed to re-establish the natural environmental features of the area.

For further Information : Tara Buakamsri, Climate and Energy Campaigner, Greenpeace Southeast Asia ; Mobile:+6694769977; e-mail: tara.buakamsri@dialb.greenpeace.org

² Claimed by the Sea, The Sunday Bangkok Post, May 21 2006.